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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,168	09/18/2001	Heiko Maas	213301US0PCT	8981

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

PRICE, ELVIS O

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 08/12/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/926,168

Applicant(s)

MAAS ET AL.

Examiner

Elvis O. Price

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 19-26 is/are pending in the application.
- 4a) Of the above claim(s) 23-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:


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### **DETAILED ACTION**

Claims 1-13 and 19-26 are pending in the application.

#### ***Election/Restrictions***

Applicants' election with traverse of Group I (claims 1-13 and 19-22) in Paper No. 6 is acknowledged. Claims 23-26 are withdrawn from further consideration pursuant to 37 CFR 1:142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicants' timely traversed the restriction (election) requirement in Paper No. 6. The traversal is on the ground(s) that the office has not applied the same standard of unity of invention as the International Preliminary Examination Authority and the Authority did not take the position that unity of invention was lacking in the International application and examined all claims together. This is not found persuasive because the Examiner has previously demonstrated by giving adequate support and reasoning as to why unity of invention is lacking for the five separate Groups of inventions (see restriction requirement).

 The requirement is still deemed proper and is therefore made FINAL.

#### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Search Report***

The search report has been considered.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 12 is rejected under 35 U.S.C. 102(a) as being anticipated by Singleton {US Pat. 5,780,694}.

Singleton discloses a surfactant alcohol, which is prepared by dimerizing an olefin mixture (see Examples 1-3 and Table 1).

Claims 5-11 and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Threlkel {US Pat. 4,959,491}.

Threlkel discloses an olefin mixture (mixture 1) which is prepared by dimerization of an olefin mixture (mixture 2) comprised of 75% by weight of linear hexene isomers and overall at least 60% by weight of hexane isomers (see Col. 3, lines 3-23; Example 1 and Table 1). The presently claimed degree of branching or the ratio of aliphatic to olefinic hydrogen atoms of the branched components or the amount of branched and/or unbranched components contained in the presently claimed olefin mixture product would be all inherent attributes of the olefin mixture (mixture 1) product disclosed by Threlkel.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Threlkel {US Pat. 4,959,491}, in view of Singleton {US Pat. 5,780,694}.

Applicants claim a process for the preparation of surfactant alcohols which have particularly advantageous properties with regard to ecotoxicity and biodegradability and of corresponding surfactant alcohol ethers by a) dimerization of olefin mixtures, b) derivatization to give primary alcohols, and c) optional subsequent alkoxylation, which comprises using an olefin mixture which comprises from 30 to 80% by weight of linear hexane isomers and overall at least 60% by weight of hexane isomers.

Threlkel teaches, inter alia, a process for preparing a highly semi-linear C<sub>12</sub> olefin mixture by dimerization (with a dimerization catalyst) of a C<sub>6</sub> olefin mixture, which is comprised of at least 60% by weight of linear hexenes (see Col. 3, lines 3-23; Col. 6, lines 65-68 through Col. 7, lines 1-52). The difference between the presently claimed invention and what is taught by the Threlkel reference is that the Threlkel reference does not teach the preparation of surfactant alcohols or alkoxylation products thereof.

Singleton teaches primary alcohol compositions, obtained by dimerizing an olefin mixture followed by subsequent conversion to the primary alcohol, that are converted to anionic or nonionic surfactants, which are either sulfated or oxyalkylated (the alkoxylation product) (see Col. 3, lines 37-45; Col. 11, lines 14-21 and Col. 12, lines 6-60).

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It would have been *prima facie* obvious to one having ordinary skill in the art, in view of the Threlkel and Singleton references, to prepare surfactant alcohols as presently claimed because Threlkel teaches biodegradable, detergent grade olefin mixtures, obtained from the dimerization of an olefin mixture comprised of at least 60% by weight of hexane isomers and Singleton teaches primary alcohol compositions, obtained by dimerizing an olefin mixture followed by subsequent conversion to the primary alcohol, that are converted to anionic or nonionic surfactants by either sulfating or alkoxyating the said primary alcohol composition.

One having ordinary skill in the art, in view of the teachings of the Threlkel and Singleton references, would have been motivated to convert olefin mixtures taught by Threlkel to a primary alcohol composition before alkoxyating the alcohol composition so as to prepare nonionic surfactants. One having ordinary skill in the art, desiring to prepare biodegradable surfactants, would have been motivated to use the Threlkel olefin mixture (mixture 1) because the olefin mixture (mixture 1) taught by Threlkel is recognized in the art as a biodegradable, detergent grade olefin mixture. Therefore, the presently claimed invention would have been obvious to one having ordinary skill in the art.

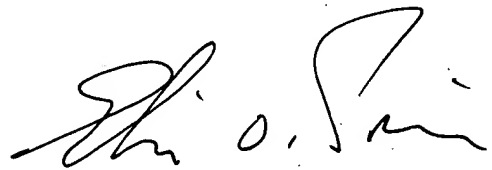
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvis O. Price whose telephone number is 703 605-1204. The examiner can normally be reached on 8:30 am to 5:00 pm; Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 703 308-4532. The fax phone

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numbers for the organization where this application or proceeding is assigned is 703 308-4556 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-1235.

A handwritten signature in black ink, appearing to read 'Elvis O. Price', with a stylized, cursive script.

Elvis O. Price  
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August 10, 2003